UNITED
NATIONS

E

Economic and Social Council

Distr.
LIMITED

E/CONF.91/L.12
7 November 1997

ENGLISH ONLY

SEVENTH UNITED NATIONS CONFERENCE ON THE
STANDARDIZATION OF GEOGRAPHICAL NAMES
New York, 13-22 January 1998
Item 12 of the provisional agenda*

WRITING SYSTEMS AND GUIDES TO PRONUNCIATION

Plene vs. vocalized orthography of names in Hebrew GIS-derived digital topographic maps

Paper submitted by Israel**

* E/CONF.91/1.

** Prepared by N. Kadmon, Emeritus Professor of Cartography, Department of Geography, The Hebrew University of Jerusalem.

97-34728 (E) 151297 191297

Hebrew writing belongs to the defective (i.e. mainly unvowelled) alphabetic scripts [1], a sub-division of the alphabetic writing system. It is often classified as a consonantic script, but this is not quite correct since vowels are represented not only by vowel points (or markers) in the form of small points and bars below, within or above the (consonant) letters, but also by certain "dual-purpose" letters which can also serve as consonants. Thus, the letter ו (vav) is pronounced consonantic *v*, but with vowel points added וֹ is *o* and וּ is *u*. Another example is the letter א (alef): in word-or-syllable-initial position it is used to precede a vowel (like Arabic ا or Korean ㅇ) and in itself is mute; but after an *a* sound it serves to lengthen or stress the preceding vowel.

Originally, Hebrew was written (at least since the 9th century BC) completely without vowel points, and all Torah scrolls (the Pentateuch or Five Books of Moses) in synagogues are still (handwritten!) thus. In the 8th-9th century AD, when the oral tradition of learning to read without vowel points was becoming lost as a result of the greatly diminishing use of Hebrew as a daily language, vocalization with the aid of vowel points was introduced, and this has been in use since then. Since the revival of Hebrew as a daily language in Israel by E. Ben-Yehuda in the early 20th century, reading of unvowelled text has again become normal and general, Only sacred books (all *printed* versions of the Bible, the Mishnah and the Talmud) as well as junior school books and other books for small children and learners of Hebrew are printed with full vocalization.

Hebrew vowel points, although making reading unambiguous, have two drawbacks. In small print, especially on a coloured background, they tend to be hardly visible. This is the case with maps, with which we are concerned here. And secondly, again in the smaller fonts, these dots and small bars often get lost in the photolithographic reproduction process employed in map work.

The question remains – why was full vocalization retained in maps, whereas in books and newspapers it has been all but deleted? The answer is that while unvocalized Hebrew words can easily be read, pronounced and understood by speakers of the language – names, and in particular foreign words and names, often can not. As an example, unvowelled the name חסן can be read as either Ḥosen or Ḥusan (villages of both names exist). And as an example of a foreign name: לנדן can be read as London, Landan, Lenden etc. Adding the vowel points חֹסֶן and לַנְדַן makes both names unequivocal.

But as mentioned above, vowel points tend to be lost, especially in mapping. There is then a third possibility: plene orthography.

Yiddish, Judaeo-German, a language which developed in the Middle Ages among the Jews of Central and Eastern Europe (and which today is still spoken by a small sector of the population of Israel) is written in Hebrew characters. But since many of its words came from non-Hebrew, chiefly German, roots, and are therefore not immediately recognizeable by readers of the Hebrew script, some letters (א, ע, ו, י) were substituted for vowels. In the Hebrew of the 1930s and onwards the same principle was introduces, though to a lesser degree and at first without any set rules. But in the last decades the problem and its solutions were institutionalized by the *Academy of the Hebrew Language*, the legally constituted body which regulates the national language. And thus were devised the rules for plene unvocalized orthography (*ketív malé*, – "plene" i.e. full spelling, because it uses more letters – as against the vocalized *ketív ḥaser*, deficient spelling). These introduce at certain defined positions in words which otherwise would have different readings, standard consonantic letters , א for a, ו for *o* and in certain cases *u*, and י for *i*. These (together with the letter ה, *h*), are then called *matres lectionis*. The pertinent rules have been published by the *Academy* [2].

/...

When the *Survey of Israel*, national surveying and mapping authority, started its new GIS-based computer-drawn digital maps, the above considerations were taken into account. Moreover, it was found that vocalization points were difficult to incorporate in the automated system. It was, therefore, decided to change over from the vocalized representation of geographical names to unvocalized plene orthography. This is how names are now found in the new topographic series at a scale of 1:25,000, which is the first to be based on a direct analytical photogrammetry-to-GIS-to maps system.

However, this solution is not an entirely satisfactory one. While it has solved the great majority of cases of ambiguous forms, there remains a proportion of names where additional vocalization is required: less than 1 percent in Israeli names, but many more in maps of foreign countries as, for example, in world atlas work. The example of Ḥosen and Ḥusan cited above is typical. Even in plene orthography both are spelled חוסן. The addition of a single dot makes part of the difference: Ḥosen is חוֹסן, while Ḥusan is חוּסן. The complete differentiation would require in each name another vowel marker: חוֹסֶן for the former and חוּסָן for the latter. Because the first is a standard lexical Hebrew word while the second is not, it suffices if the vowels are added in the second name only. In the present GIS of the *Survey of Israel* it proved difficult to incorporate the vowel points, and therefore they are being added manually in the less than 1% of cases (as against the 100% vowelling in analog maps). It is hoped that a new vocalizing system under investigation will facilitate the computerized addition of the necessary vowel points.

Finally, it should be noted that the introduction of plene orthography in no way alters the pronunciation of Hebrew names, and transliteration is hardly affected.

Notes

[1] For this and some other technical terms used in the present paper, see: UNGEGN Working Group on Toponymic Terminology, *Glossary of Toponymic Terminology*, versions 2 and 4, edited by N. Kadmon, convenor.

[2] "Rules for unvowelled script". *Leshonenu La'am*, Quarterly of the Academy of the Hebrew Language, special issue, Jerusalem, July 1994, pp. 31-43 (in Hebrew).